

Commentary

Health in All Policies for Big Cities

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Healthy people live in healthy communities. Nowhere is that more apparent or more challenging than in cities. Cities face unique challenges with regard to changes in their economic base, concentrated poverty, housing quality and affordability, violence, and pollution exposure. Health outcomes closely track with these challenges.¹ The health of cities is often expressed in aggregate measures of the health of individuals and in terms of specific diseases, injuries, and causes of death. The implication is that if individuals simply reduced risk factors such as poor diets and had better access to medical care, they could reach their full potential for health. However, that is a gross oversimplification. Health is much more a product of the social and environmental conditions in which individuals live, work, and play that influence health directly and indirectly. By one estimate, for example, approximately 20% of health can be attributed to access to medical care, 30% can be attributed to health behaviors such as smoking and exercise, 40% attributed to socioeconomic factors such as employment and income, and 10% to the built and natural environments including influences such as air quality and access to safe places to exercise.²

In a recent survey, big city health officials identified “health in all policies” (HiAP) as a top priority.³ The concept of HiAP has international roots. The World Health Organization’s (WHO) definition of health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”⁴ underscores the importance of a broad framework for understanding the factors that contribute to the health of individuals and populations. Beginning in 1988, the WHO has advocated for “healthy public policy,” which focuses on working across sectors and beyond the medical care system to ensure that health is taken into account when forming public policy.⁵ Building on that work, in 2006 Finland adopted HiAP as its main health theme during its presidency of the European

Union, with the goal that European Union and Member States’ policies would begin to take health impacts into consideration.⁶ The WHO defines HiAP as:

An approach to public policies across sectors that systematically takes into account the health and health-system implications of decisions, seeks synergies, and avoids harmful health impacts, in order to improve population health and health equity. The HiAP approach is founded on health-related rights and obligations. It emphasizes the consequences of public policies on health determinants, and aims to improve the accountability of policy-makers for health impacts at all levels of policy-making.⁷

Since 2006, HiAP has quickly gained momentum in the United States and internationally.^{8,9} In recent decades, the link between social and economic factors—often termed “social determinants”—and health has become firmly established in research. The social gradient, whether measured by social class, income, or education, is linked to life expectancy, quality of life, and many other specific health outcomes from injuries to mental health and cardiovascular disease.^{10,11} Neighborhood and housing conditions play a critical role in a wide range of illnesses, and education—particularly in early childhood—is among the most important factors determining one’s lifelong health.

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● A Commonsense Approach to Building Healthier Communities

Beyond the public health research, from a more commonsense perspective, healthy communities are easy to recognize: they are, by and large, the places where people want to live. The California Strategic Growth Council's Health in All Policies Task Force described a healthy community as shown in Table 1. Many examples illustrate the importance of such basic living conditions to health. Reducing emergency department visits for asthma is not simply a matter of better drugs and access to care—it is about reducing pollution, exposure to tobacco smoke, and addressing housing problems such as mold and pests. Preventing cardiovascular disease is not just about better medical treatment—it is about improving access to healthier foods and creating environments that encourage physical activity.

Over the last century, progress in medical science has largely created the perception that medical care and health are synonymous. Yet, health and health disparities—the preventable differences in the burden

of disease, injury, violence, or opportunities to achieve optimal health—are largely a product of social and environmental disadvantage.¹² Although important, medical care cannot solve the problem. Individuals will be able to more easily reach their potential for health, and health disparities will be reduced if members of communities have access to better jobs, education, and housing and have reduced exposure to environmental hazards.

Creating healthy communities requires building a culture of health, where health is integrated into decisions made in all sectors of society. For example, creating walkable, bikeable communities that support physical activity means that urban planners, transportation and parks officials, law enforcement, and public health officials need to work together to create complete, safe streets with easy access to stores and parks and that facilitate a sense of community. Cities must provide good educational opportunities, jobs, affordable housing, and livable incomes to enable their residents to be healthy and productive. Health departments can contribute to this effort by applying a HiAP approach that brings data and expertise to the decisions that shape the living conditions and opportunities for health in American communities.

This article reviews case examples of the use of HiAP and related approaches in large US cities, identifies common elements of HiAP initiatives, and discusses challenges and recommendations to facilitate successful implementation of HiAP.

TABLE 1 ● Description of a Healthy Community^a

A healthy community

Meets basic needs of all

- Safe, sustainable, accessible, and affordable transportation options
- Affordable, accessible, and nutritious foods and safe, drinkable water
- Affordable, high-quality, socially integrated, and location-efficient housing
- Affordable, accessible, and high-quality health care
- Complete and livable communities including high-quality schools, parks and recreational facilities, child care, libraries, financial services, and other daily needs
- Access to affordable and safe opportunities for physical activity
- Able to adapt to changing environments, resilient, and prepared for emergencies
- Opportunities for engagement with arts, music, and culture

And provides

- Quality and sustainability of environment
- Clean air, soil, and water, and environments free of excessive noise
- Tobacco- and smoke-free
- Green and open spaces, including healthy tree canopy and agricultural lands
- Minimized toxins, greenhouse gas emissions, and waste
- Affordable and sustainable energy use
- Aesthetically pleasing
- Adequate levels of economic and social development
- Living wage, safe and healthy job opportunities for all, and a thriving economy
- Support for healthy development of children and adolescents
- Opportunities for high-quality and accessible education
- Health and social equity

^aReprinted from Rudolph et al.²⁵

● Case Examples: Implementing HiAP in Large Cities

Several cities have adopted formal HiAP initiatives, and many municipalities are implementing related intersectoral activities focused on healthy public policy. These policies ensure that health effects are routinely taken into consideration.

Seattle/King County

The Seattle/King County Health Department in Washington State has led efforts to integrate health and equity into planning and through this work has established strong cross-sectoral partnerships with planning, transportation, and housing officials. This work helped lay the foundation for the county's recent adoption of a strategic plan and ordinance that aim to integrate health and equity across the county government's activities. The 2014 ordinance creates a multiagency task force and establishes 14 determinants of equity and health against which county activities

will be gauged.¹³ Yearly progress reports will document a wide range of accomplishments, which will include

- changes to the Natural Resources and Park's budget to provide better opportunities for physical activity in low-income neighborhoods by the building of trails;
- initiatives to improve educational outcomes in low-income and migrant communities, and collaboration between the criminal justice and education departments to reduce the number of students expelled from school;
- funding for several adult and criminal justice early intervention programs to reduce incarceration rates and improve employment options for at-risk low-income and minority residents; and
- the inclusion of health-based metrics and objectives in city and county land use and transportation plans.¹⁴

Los Angeles

In 2012, the Los Angeles County Board of Supervisors created the Healthy Design Workgroup, comprising Public Works, Regional Planning, Parks & Recreation, Internal Services Department, Community Development Commission, Beaches and Harbors, Arts Commission, Chief Information Office, Chief Executive Office, and the Fire Department, and led by the Health Department. The workgroup is tasked with developing and implementing policies to encourage safe walking, biking, and access to transit, providing access to outdoor physical activities, as well as to community gardens and farmers' markets. Activities implemented to date include developing bicycle parking guidelines and healthy design guidelines for developers and creating a "Complete Streets" project checklist to ensure inclusion of elements such as bike lanes and attractive streetscapes that welcome pedestrians. The workgroup has also been successful in implementing high visibility crosswalks at dangerous intersections and promoting gardens and farmers' markets in unincorporated areas. The Healthy Design Workgroup has an interdepartmental grants team that collaborates on seeking funding for healthy design projects.

San Francisco

San Francisco established a Program on Health, Equity, and Sustainability in 2002. Through partnerships with community groups and other city agencies, the Program on Health, Equity, and Sustainability has achieved many important health-related improvements, such as creating new standards to protect indoor air quality in housing near congested roads.

They also created a collaborative project with the city transportation agency to reduce pedestrian injuries, which includes a new position in the health department (funded by the transportation agency) responsible for modeling pedestrian injury associated with transportation design options. They have also been responsible for a range of other initiatives that address issues such as food access, housing quality and affordability, and land use planning through interagency and community partnerships.^{15,16}

Boston

Building on growing interest in healthy community design, in 2012 the Boston Public Health Commission convened a HiAP task force comprising city agencies and interested community organizations. To date, the task force has contributed to the transportation department's Complete Streets guidelines, a cross-agency initiative to replace part of the city's taxi cab fleet with hybrid vehicles, a pilot health impact assessment (HIA) to inform neighborhood redevelopment, and other community design-oriented activities.¹⁷

Washington, DC

In Washington, DC, the mayor issued a 2013 executive order on HiAP to facilitate implementing the city's Sustainability Plan. The plan contained numerous provisions to improve health by improving access to parks, addressing food insecurity and access to nutritious foods, and increasing access to safe and affordable housing for low-income residents. The order created a multiagency HiAP task force charged with studying and reporting on actions that could be taken to "coordinate across agencies to embed practices to improve health." The study is currently in progress.^{18,19}

Richmond, California

Richmond, California, recently adopted a new HiAP strategy and ordinance that creates an interdepartmental team with representatives of each city agency and seeks to integrate health equity into the city's strategic and business plans, accountability and performance systems, and budgets.²⁰

Nashville, Tennessee

In other places, nonhealth agencies are providing important leadership. The Nashville Metropolitan Planning Organization, for example, adopted new health-based scoring criteria to guide selection of transportation projects for funding. The criteria resulted in a marked increase in projects that included cycling or

pedestrian elements—from 2% in the previous plan to 70% in plan 2035.²¹

● Funding for HiAP

Many government and private foundation funding initiatives are supporting HiAP-related approaches. The Centers for Disease Control and Prevention (CDC) has long offered grant initiatives that help localities use “policy, systems, and environmental change” approaches that focus on engaging partners in other sectors.^{22,23} Nonhealth agencies have also become a source for funding this work. For example, as part of the Sustainable Communities Partnership, other agencies (such as Housing and Urban Development, the Environmental Protection Agency, and the Department of Transportation) are now supporting initiatives that incorporate health.

Private foundations are also playing a central role. The de Beaumont Foundation recently began an initiative to support large city health departments to conduct HIAs. The Robert Wood Johnson Foundation has supported Healthy Eating and Active Living Research Programs, County Health Rankings and Roadmaps, the Health Impact Project, and other initiatives that focus on cross-sectoral approaches to healthy public policy. The Kellogg Foundation supports a program called Place Matters, and a multifunder collaborative titled Convergence Partnership. Both of these programs focus on multisector approaches to improve community living conditions, health, and health equity. Many other foundations, such as the California Endowment, the Blue Cross and Blue Shield of Minnesota Foundation, the Kresge Foundation, the Kansas Health Foundation, Saint Lukes Foundation of Cleveland, and Kaiser Permanente of Denver, have supported HIAs as well.

● Tools of HiAP

HiAP uses a mix of analytic methods, engagement and leadership strategies, and legal and policy tools to address the root causes of illness by supporting activities

in nonhealth sectors. The elements of HiAP can be described as falling under 5 categories of activities.

Engaging nonhealth sectors, community, and private sector stakeholders

Engaging nonhealth sectors is a defining feature of HiAP, and multiagency task forces charged with embedding health objectives across all government actions are a common strategy. The Affordable Care Act created the National Prevention Council, which is chaired by the Surgeon General and convenes the secretaries of 20 federal departments (eg, Education, Labor, Transportation, and Housing) to provide “coordination and leadership to ensure the government is focused on improving prevention, wellness, and health promotion practices.” The National Prevention Council issued a strategy for improving Americans’ health that includes 7 priorities—for example, healthy eating, active living, and violence prevention—and includes recommended actions that can be taken by federal, state, and local government agencies outside the health sector.²⁴

California’s 2010 executive order on HiAP was an early and influential application in the United States. A central component of this order was the creation of a 19-agency task force as part of the state’s Strategic Growth Council. Together, these agencies developed a healthy communities framework, along with a broad collection of goals for improving health and health equity (Table 2), and a set of specific implementation plans.⁸ Many of the city HiAP efforts described earlier make reference to California’s approach.

Nonhealth agencies are also beginning to adopt health-oriented policies that are independent of formal collaborations with public health agencies. For example, a growing number of county and metropolitan planning departments now have health experts on staff and are beginning to integrate health objectives into their plans and project funding criteria.²⁶ “Complete Streets,” for example—street designs that promote safe walking, cycling, and transit access—are now a priority in Oregon, California, Illinois, North Carolina, Minnesota, Connecticut, and Florida.²⁷

TABLE 2 ● California Health in All Policies Task Force: Aspirational Goals^a

1. *Active transportation:* Every California resident has the option to safely walk, bicycle, or take public transit to school, work, and essential destinations
2. *Housing:* All California residents live in safe, healthy, affordable housing
3. *Parks, green space, and physical activity:* Every California resident has access to places to be active, including parks, green space, and healthy tree canopy
4. *Violence prevention:* Every California resident is able to live and be active in his or her communities without fear of violence or crime
5. *Healthy food:* Every California resident has access to healthy, affordable foods at school, at work, and in his or her neighborhood
6. *Healthy public policy:* California’s decision makers are informed about the health consequences of various policy options during the policy development

^aReprinted from Rudolph et al.²⁵

Community involvement is essential to the goals and success of HiAP efforts. Ensuring that communities play a substantive role in decisions that affect them can directly contribute to health and well-being, particularly in neighborhoods suffering from disinvestment and disenfranchisement. Moreover, evaluations suggest that changes in political leadership and support can pose a significant challenge to the success and longevity of HiAP initiatives.²⁸ In this light, the value of community as a driving force for HiAP may be underrecognized. In San Francisco, the health department developed a strong and lasting partnership with low-income communities: the partnership began in response to concerns about local pollution and evolved into the Program on Health, Equity, and Sustainability, which has now endured for nearly 15 years and through several transitions in political leadership (described earlier).²⁹ In New York State, widespread demands for public health involvement in planning the state's policies on natural gas development ultimately supported a stronger health department role in that planning process.³⁰

Private sector stakeholders are another important partner in HiAP, as their investments shape many health determinants, including economic and employment opportunities, traffic and pollution exposure, and the availability of amenities important to health. Recent collaboration between public health and community developers, for example, shows considerable promise as a way to address the health risks posed by concentrated neighborhood poverty and poor housing conditions.³¹

Research and data

The ever-growing body of research that explores the social, economic, and environmental influences on health and illness provides the rationale for HiAP and is driving the growing interest in this approach.^{10,11,32-35}

Public health objectives and surveillance programs are beginning to focus on determinants of health. For example, *Healthy People 2020*—which establishes the federal government's 10-year national health improvement objectives and measures—for the first time included a set of indicators based on determinants such as income, availability of healthful food, and housing quality and affordability.³⁶ At the state and county levels, America's Health Rankings and County Health Rankings & Roadmaps provide annual reports of health outcomes and selected health determinants. The CDC's Environmental Public Health Tracking program supports 23 states and 1 city in implementing systems that will track environmental influences on health.³⁷

Finally, research also focuses on determining which policy actions—beyond improving access to and the quality of medical care—hold the most potential to address prevalent health conditions. The Guide to Community Preventive Services, for example, is a CDC-supported task force that conducts systematic reviews on a wide range of preventive measures, some of which address policies in other sectors such as housing, urban design and land use, and education.³⁸

Analytic toolkit

Public health professionals are developing a range of tools that facilitate the application of public health research to decisions outside the health sector. For example, the Sustainable Communities Index is a comprehensive set of indicators that relate living conditions at the neighborhood level to health outcomes.³⁹ The index measures a range of health determinants, such as access to parks, healthful food outlets, and public transit. It also includes geospatial data on pollution sources and considers economic and social indicators known to be important to health. The Sustainable Communities Index has been applied by cities to guide development of land use plans and neighborhood redevelopments. A different health determinant checklist has been used in Meridian Township, Michigan, to allow planners to collaborate with developers to optimize the health benefits of their proposals. On the basis of the success of this tool, the region's metropolitan planning organization is now working with the health department to develop a more comprehensive, online version for use by planning and health departments throughout the region.^{40,41}

For the transportation sector, the WHO has developed a widely used "Health Economic Assessment Tool" that allows users to model the economic benefit of "active" transportation (transit and cycling and pedestrian infrastructure).⁴² The CDC is now working with health and transportation authorities in several regions to calibrate the Integrated Transport and Health Impact Modelling tool to model health implications of changes in physical activity, air pollution, and injuries relative to various transportation options.⁴³

Laws and formal frameworks

Laws that formalize interagency HiAP task forces, such as those reviewed in the aforementioned case examples, constitute an emerging trend, as shown in the examples reviewed previously.

Other recent laws support integration of health into a specific decision-making context or sector. In Massachusetts, for example, transportation reform legislation created the Healthy Transportation Compact.

Chaired by the secretaries of health and transportation, the compact is charged with achieving better health outcomes through improved coordination of land use planning, transportation, and health policy.⁴⁴ In Washington State, the legislature asked the Board of Health to prepare “health impact reviews” of proposed legislation in response to requests from the governor or legislature. These reviews use the determinants of health as an analytic frame and must be completed within 10 days of the request.⁴⁵ A number of states have also considered legislation to support or require HIAs.⁴⁶

Health objectives are also embedded in many laws that predate the current interest in healthy public policy. Laws that protect air and water quality, require seat belt use, and limit blood alcohol levels while driving establish specific regulations that are implemented by other sectors to protect health. A recent national sample of laws in energy, transportation, agriculture, and waste management identified a large number of laws that create requirements for considering health impacts in developing plans, regulations, and project permits.^{34,35,47}

Communications

Advancing HiAP requires establishing an effective dialogue with varied audiences, many of whom are unfamiliar with public health. Some authors have referred to the risk that HiAP will be viewed as “health imperialism”—that is, asserting health above other important objectives. Each sector in government and society has a unique mission, objectives, authority, and culture. HiAP advocates emphasize the importance of achieving a balance between asserting the need to consider health and understanding the practical, economic, political, and cultural context in which other departments operate. Practically speaking, public health recommendations offered with no consideration of the legal, regulatory, and fiscal constraints on the decision maker are more likely to be ignored or rejected. Policies and projects that have positive health impacts may be more likely to be adopted. Thus, to build support for HiAP, a communications strategy that identifies shared objectives and opportunities for mutual “wins” can be helpful.⁴⁸

A second basic communication challenge for HiAP is that the biomedical model’s focus on individual characteristics and risk factors—such as genetics, alcohol consumption, diet, or exercise—is more familiar to many people and may be easier for people to understand than less obvious, indirect influences such as access to parks, proximity to grocery stores, the economy, and education. To explain the value of HiAP, health professionals need to find ways to plainly communicate the

idea that the relationship between health determinants and health outcomes is complex and multifactorial.⁴⁸

● Health Impact Assessments: A Common Tool for Implementing HiAP

HIAs have rapidly gained popularity as a way to integrate health considerations into decisions made outside the health sector and are a common tool for implementing HiAP.^{49,50} They structure the application of the HiAP domains described earlier—data, research tools, stakeholder engagement, and legal structures—to inform a specific policy question. To predict potential impacts and develop policy recommendations, HIAs review published literature, analyze baseline data on prevalent illnesses and health determinants, and collect qualitative data from stakeholders via community meetings or focus groups. HIAs also sometimes include *de novo* data collection or surveys to determine the prevalence of health issues or health-related concerns and quantitative modeling of changes in health determinants or impacts. They engage stakeholders, including policy makers, community organizations, and private sector actors, at each step of the process.⁵¹ Evaluations show that HIAs often help create new, enduring intersectoral partnerships.⁵² From this perspective, HIAs function not only as a tool to inform a specific decision but also as a concrete way to move from aspirational goals to building a strong, practical foundation to support HiAP.

In Atlanta, for example, a 2004 HIA on the BeltLine, a multibillion dollar proposal for a network of transit and trails around the city, identified communities near the corridor with baseline health disparities and provided recommendations to maximize the health benefits of the project. Since 2004, implementation of the HIA recommendations contributed to more than \$7 million in public and private grant funding for brownfield remediation and trail construction, and as of 2012, more than 5 miles of trails and 22 acres of new parkland were open to the public. The HIA also led to embedding health expertise in the ongoing planning of the BeltLine and the addition of health metrics to the criteria by which funding for BeltLine projects will be determined. Also growing out of this effort, the Center for Quality Growth and Regional Development at Georgia Tech is now collaborating with the Atlanta Regional Commission—which guides planning for municipalities in the region—to integrate health into planning goals and metrics.⁵³ A number of other cities have used HIAs to develop cross-agency collaborations that yield tangible results as shown in Table 3.

It is also important to recognize, however, that many HiAP activities do not require HIAs:

TABLE 3 ● Examples of HIAs Conducted to Inform City Decisions^a

HIA Topic and Location	Outcome of HIA
1. <i>Farmers Field Football Stadium</i> : An HIA that informed decisions on the proposed construction of the Farmers Field football stadium complex in downtown Los Angeles.	According to the organizations that conducted this assessment, the HIA helped the following provisions become part of the approved Farmers Field development plan: a \$15 million housing trust fund to preserve and create very low-income housing in neighborhoods affected by the construction; \$1.9 million of funding for air quality and bus rider improvements; neighborhood improvement plans; a requirement that the city's living wage will be the minimum for all on-site jobs; supplements to the neighborhood park commitment; establishing that 40% of all local hires in permanent jobs will be prioritized for disadvantaged workers.
2. <i>San Francisco Road Pricing</i> : An HIA to inform a proposed policy in San Francisco that would charge a fee for driving in congested areas during am/pm rush hours and use the revenue to support transportation infrastructure and services.	The Road Pricing HIA, completed in 2011, led to improved interagency coordination between SFDPH and the SFCTA and the inclusion of health considerations in other transportation projects. For example, SFCTA and SFDPH coordinated work on the Bus Rapid Transit projects being planned for San Francisco's Van Ness Avenue and Geary corridors, both of which have high baseline densities of pedestrian injury, resulting in targeted improvements in project design. New interagency collaborations on transportation projects and policies continue to emerge.
3. <i>South Lincoln Homes</i> : An HIA done as part of a master plan to update the Denver Housing Authority's South Lincoln Homes low-income housing.	The HIA resulted in the identification and adoption of 37 health-related recommendations for the South Lincoln Homes redevelopment site, now called Mariposa. Implemented recommendations for Mariposa include the addition of striped bike lanes or sharrows, improved lighting and street crossings to access grocery/markets, and improved pedestrian spaces/closed streets/added street trees.
4. <i>Advanced Metering Infrastructure</i> : An HIA that addressed the health effects of a proposal by Commonwealth Edison to implement smart metering technology in western metropolitan Chicago	After hearing HIA-based testimony, the Illinois Commerce Commission supported funding of a robust consumer education system, maintained the current system requiring a site visit for disconnection for nonpayment, and required that metrics designed to measure the impact of the technology on vulnerable populations be developed. These decisions were in line with recommendations in the HIA.
5. <i>Baltimore City's Comprehensive Zoning Code Rewrite</i> : An HIA that examined the potential health impacts of the city's proposed zoning code revisions and focused on issues including obesity, physical activity, nutrition, and violent crime.	The HIA made 36 recommendations. Fourteen of these recommendations were included in the first draft of Transform Baltimore. Ongoing engagement by the health department has informed further drafts of Transform Baltimore, on issues such as alcohol outlet density.
6. <i>Bottineau Transitway HIA</i> : An HIA of a proposed transitway connecting Northern Minneapolis to county suburbs.	Hennepin County's Department of Housing, Community Works, and Transit has been funded to conduct health and health equity–related community engagement around station area planning for the first 4 proposed stations. Hennepin is working with Nexus Community Partners to reach underrepresented communities. Consulting firms that submit station area plans are required to work with Hennepin and Nexus to ensure broad community outreach and stakeholder engagement.
7. <i>Lower Duwamish Waterway Superfund Site HIA</i> : An HIA to inform decisions related to the proposed cleanup of the Lower Duwamish Waterway Superfund site.	The HIA made a number of recommendations for ways to optimize the health impacts of the cleanup. The Mayor and Seattle City Council wrote a letter making recommendations for the cleanup based on issues raised by the HIA.

Abbreviations: HIA, health impact assessment; SFDPH, San Francisco Department of Public Health; SFCTA, San Francisco County Transportation Authority.

^aAdapted from Health Impact Project map database.⁵⁴

multiagency task forces, for example, often identify specific policy changes or programming that can be implemented to support health without conducting a formal HIA.⁵⁰

● Challenges and Recommendations

HiAP is part of the transformation of public health from a biomedical model to one that addresses the underly-

ing determinants of health. We are still at an early stage, and important challenges, including the 3 described here, must be addressed to fulfill the potential of HiAP to improve Americans' health.

Address the fundamental causes of health disparities

Many HiAP initiatives have focused on aspects of the built environment—transportation, housing, and food

access, for example. Even more fundamental issues related to social and economic conditions will need to be addressed if large cities hope to substantially close the gaps: policies that relate to income inequality and economic mobility, educational attainment, employment, and criminal justice, for example, provide important opportunities for improving public health. These policies often involve political solutions, sometimes in a contentious and divisive political policy process. Health agencies will need to find productive ways to navigate the real-world political challenges and bring much-needed public health data into the arena of social and economic policy.⁵⁵

Conduct research on salient questions using appropriate methods

Quantitative policy analyses and economic evaluations can be useful for informing decisions in HiAP but rely on high-quality data and well-conducted studies that must come from both academic and applied research. Traditional biomedical approaches to assessing the effectiveness of interventions are likely to prove inadequate, however, given the multiple social, economic, and environmental influences involved. Environmental exposures are difficult to isolate, and we have meager understanding of the interaction effects of multiple chemical and physical exposures common in the urban environment. Randomized trials are often impractical and too costly and cannot fully address heterogeneous social and physical environments. Studies using both quantitative and qualitative social and environmental science methods are needed to understand underlying mechanisms and interventions that consider contextual information as well as interaction effects. By close collaboration with decision makers and stakeholders, analysts can provide the best-available information on the health consequences of interventions and present it in a compelling and relevant fashion. HIAs exemplify an approach to dealing with complex information in a practical way.⁵¹

Develop a workforce with the necessary skills and experience

HiAP requires a skilled interdisciplinary team of organizers and facilitators, subject matter experts, those with scientific skills, and communicators. New training programs that offer opportunities for cross-disciplinary training in health, planning, and other fields are needed to build a cadre of experts with the technical skills to support more effective cross-sectoral collaboration. Moreover, because experience has shown that leadership and communication skills are central to the success of HiAP efforts, consideration should be given

to developing training programs that not only build technical skills but also offer opportunities to gain practical experience in cross-sectoral work and leadership.

Conclusion

The greatest potential for health improvement in big cities lies largely outside the immediate purview of public health agencies. Using HiAP strategies, however, provides a promising way for health agencies to build healthier communities through establishing new partnerships beyond the health sector and ensuring that new programs and policies integrate health considerations.

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